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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/643,333	08/22/2000	Harry A. Loder	55243USA3B	8443

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EXAMINER

PAK, SUNG H

ART UNIT PAPER NUMBER

2874

DATE MAILED: 05/01/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/643,333

Applicant(s)

LODER ET AL.

Examiner

Sung H. Pak

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-37 is/are pending in the application.
- 4a) Of the above claim(s) 13-22 and 32-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-12 and 23-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3,9,10,11
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 8-12, 23-31, drawn to a backplane connector assembly, classified in class 385, subclass 53.
- II. Claims 13-22, drawn to a fiber optic connector system, classified in class 385, subclass 55.
- III. Claims 32-37, drawn to an apparatus and method of controlling bend radius, classified in class 385, subclass 134.

The inventions are distinct, each from the other because of the following reasons:

Inventions group II and I are related as combination and subcombination.

Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the fiber optic connector system claimed in group II does not require the particulars of the backplane connector assembly as claimed in group I as evidenced by the claim 13. The subcombination may have separate utility in other combinations such as backplane fiber optic adaptor.

Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.

Inventions groups I & II and group III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the invention of group III have different modes of operation, different functions, and different effects as the inventions of groups I&II.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with Nestor Ho on April 25, 2002 a provisional election was made without traverse to prosecute the invention of group I, claims 8-12, 23-31. Affirmation of this election must be made by applicant in replying to this Office action. Claims 13-21, 32-37 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim

remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 26 recites the limitation, "...housing is electrically conductive and is electrically grounded and the doors are non electrically conductive." However, the applicants disclosure describes the housing being non-conductive and doors being electrically conductive (pages 8-9). The claim language contradicts what is described in the specification, and the claim fails to particularly point out and distinctly claim the subject matter which applicant regards as the invention. .

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

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The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 23, 25-28, 30-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Roth (US 6,079,881).

Roth reference was cited by the Information Disclosure Statement.

Roth discloses a fiber optic connector adapter for backplane application (column 3 line 13) with all the limitations set forth in the claims, including: backplane housing defining a longitudinal receiving cavity (Fig. 2); the cavity having a frontal and rear opening with foldable frontal and rear door utilizing a foldable spring, wherein the doors automatically close when an optical connector member is not placed in the opening (Fig. 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 24, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roth (US 6,079,881).

Roth discloses a fiber optic connector adapter with all the limitations set forth in the claims as discussed above, except it does not teach the housing having plurality of linearly stacked receiving cavities, and it does not teach the foldable doors being electrically conductive.

However, backplane fiber optic connector housing having plurality of linearly stacked receiving cavities is well known and commonly used in the art. Such configuration provides a known advantage of having high density of fiber optic connections for a given space. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Roth device to have plurality of linearly stacked receiving cavities. It would be desirable to have high density fiber optic connections.

Also, it is well known in the art to provide an electrically conductive connector shutters. Such elements are known to provide effective protection against EMI (electromagnetic interference) at the connection site. Therefore, it would have been obvious to

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a person of ordinary skill in the art at the time the invention was made to modify Roth device to have electrically conductive shutter doors. It would have been desirable to have a connector with a low EMI.

Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al (US 6,039,585).

Kim et al discloses a connector assembly with all the limitations set forth in the claims, except it does not teach that such connector assembly is a backplane connector assembly. Specifically, Kim et al discloses: plurality of longitudinal cavities (Fig. 14 and 16); at least one folding door comprising a hinge plate formed integrally with a pair of biasing members to cover the frontal opening, there being an intervening wall between the receiving cavities ("80" in fig. 16); a connection adapted to secure the hinge plate adjacent the intervening wall to provide attachment of the folding door to the housing (Fig. 16); the folding door being made of BeCu alloy (column 6 line 19).

However, such connector assembly is commonly used in a backplane connector arrangement. Backplane arrangement is advantageous because it allows for convenient and organized fiber optic connections in a space efficient manner. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Kim et al device to be used in a backplane connection arrangement.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Grois et al (US 6,331,079 B1) and Burkholder et al (US 2001/0048790 A1) disclose shielded backplane connector assembly with foldable door elements.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sung H. Pak whose telephone number is (703) 308-4880. The examiner can normally be reached on Monday - Thursday : 6:30am-5:00pm.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



sp
April 27, 2002

Sung H. Pak
Examiner
Art Unit 2874


